

REMARKS

The Office Action Summary dated 11/17/2008 indicates claims 1-20 are pending, of which claim 1-4 and 20 are withdrawn and claims 15-19 are rejected. In the Detailed Action:

Section 1 indicates that the election restriction requirement is made final.

Section 2 indicates that Claims 5 and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Tsai et al. (US 2003/0013387).

Section 3 indicates that Claim 15 is rejected under 35 U.S.C. 102(a) as being anticipated by Tsai et al. (US 2003/0013387).

Section 4 indicates that Claims 6-11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. (US 2003/0013387) in view of Roberts et al. (US 2004/0048564).

Section 5 indicates that Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. (US 2003/0013387) in view of Chen et al. (US 6,712,681).

Claim Rejections - 35 USC 102

Section 2

Section 2 of the Office Action indicates that Claims 5 and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Tsai et al. (US 2003/0013387). The rejection of claims 10 and 12 under 35 USC 102 is improper. The Office Action does not meet the requirements provided in the Manual of Patent Examining Procedure (MPEP) 2143.03 and 2131 for a rejection under 35 USC 102(a). Relevant sections from the MPEP are as follows:

'2143.03 All Claim Limitations Must Be **>Considered< [R-6]

** "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

MPEP 2131

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY
ELEMENT OF THE CLAIM

"A claim is anticipated only if each and every element as set forth in the claim is
found, either expressly or inherently described, in a single prior art reference."
Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d
1051, 1053 (Fed. Cir. 1987).

...

"The identical invention must be shown in as complete detail as is contained in
the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d
1913, 1920 (Fed. Cir. 1989).'

Therefore, all of the words in Applicant's claim 5 must be considered. Applicant's claim
5 recites "providing a stacked pad, the stacked pad comprising a top pad having a
Shore D hardness from about 40 to about 70 and a subpad having a Shore D hardness
substantially equal to the hardness of the top pad..." Tsai et al. do not teach or suggest
the subpad having a "Shore D hardness substantially equal to the hardness of the top
pad." The Office Action indicates that Tsai et al. teach a "hard polishing material/top
pad" and a "soft polishing material/subpad." Such details in the description contradict
the Office Action statement that the teachings of Tsai et al. read on Applicant's claim 5.
Specifically, having a hard top pad and a soft subpad does not equate to the top pad
and the sub pad having equal hardness.

Tsai et al. further specify the differences between the hardness of the top pad
and the subpad by giving different ranges of Shore D hardness of 50 or greater for the
top pad and Shore D hardness of less than 50 for the subpad. It is to be noted that the
ranges do not overlap. Therefore, the hardness of the top pad and the hardness of the
subpad taught by Tsai et al. cannot be substantially equal. Tsai et al. does not teach
every element as set forth in Applicant's claim 5. Applicant's independent claim 5 is not
anticipated by Tsai et al.

In view of the arguments presented above, withdrawal of the rejection of Applicant's independent claim 5 under USC 102 (a) is respectfully requested. Upon withdrawal of the rejection of Applicant's independent claim 5, withdrawal of the rejection of dependent claims 6-14 is respectfully requested as claim 6-14 depend from allowable independent claim 5 and add additional details and/or description.

Regarding the rejection of claim 12, the Office Action states that Tsai et al. discloses polishing substrates/plurality of wafers (page 2, paragraph 0014). However, the referenced section in Tsai et al., page 2, paragraph 0014, is silent regarding pad conditionings. As a consequence, the referenced section in Tsai et al. is silent regarding the frequency of pad conditionings. Applicant's claim 12 recites "processing a plurality of wafers between pad conditionings." Upon consideration of all of the words in Applicant's claim 12 as required in the MPEP, it is clear Tsai et al. do not anticipate Applicant's claim 12 because Tsai et al. do not teach every element as set forth in Applicant's claim 12.

Withdrawal of the rejection of Applicant's dependent claim 12 under USC 102 (a) is respectfully requested.

Section 3

Section 3 of the Office Action indicates that Claim 15 is rejected under 35 U.S.C. 102(a) as being anticipated by Tsai et al. (US 2003/0013387). The rejection of claim 15 under 35 USC 102 is improper. The Office Action does not meet the requirements provided in the MPEP 2143.03 and 2131 (copies of relevant sections provided above) for a rejection under 35 USC 102(a) for essentially the same reasons as those presented above regarding Applicant's independent claim 5.

All of the words in Applicant's claim 15 must be considered. Applicant's claim 15 recites "the stacked pad comprising a top pad and a subpad, wherein the hardness or modulus of the top pad substantially equals the hardness or modulus of the subpad...." Tsai et al. do not teach or suggest the subpad having "the hardness or modulus of the

top pad substantially equals the hardness or modulus of the subpad.” The Office Action indicates that Tsai et al. teach a “hard polishing material/top pad” and a “soft polishing material/subpad.” Such details in the description contradict the Office Action statement that the teachings of Tsai et al. read on Applicant’s claim 15. Specifically, having a hard top pad and a soft subpad does not equate to the top pad and the sub pad having equal hardness.

Tsai et al. further specify the differences between the hardness of the top pad and the subpad by giving different hardness ranges of Shore D hardness of 50 or greater for the top pad and Shore D hardness of less than 50 for the subpad. Note, the ranges do not overlap. Therefore, the hardness of the top pad and the hardness of the subpad taught by Tsai et al. cannot be substantially equal. Tsai et al. does not teach every element as set forth in Applicant’s claim 15. Applicant’s independent claim 15 is not anticipated by Tsai et al.

In view of the arguments presented above, withdrawal of the rejection of Applicant’s independent claim 15 under USC 102 (a) is respectfully requested. Upon withdrawal of the rejection of Applicant’s independent claim 15, withdrawal of the rejection of dependent claims 16-19 is respectfully requested as claims 16-19 depend from allowable independent claim 15 and add additional details and/or description.

Claim Rejections - 35 USC 103

Section 4

Section 4 of the Office Action indicates that Claims 6-11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. (US 2003/0013387) in view of Roberts et al. (US 2004/0048564). The rejection of Claims 6-11 and 13-14 under 35 USC 103 is improper. The Office Action does not meet the requirements provided in the MPEP 2143.03 for a rejection under 35 USC 103. A relevant section from MPEP 2143.03 is presented as follows:

"When evaluating claims for obviousness under 35 U.S.C. 103, all the limitations of the claims must be considered and given weight, *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983) *aff'd mem.* 738 F.2d 453 (Fed. Cir. 1984)."

Furthermore, the rejection of claims 6-11 and 13-14 under 35 USC 103 is improper because the Office Action does not consider the entire contents of the cited references as required in MPEP Section 2141.02 which states:

"In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious."

"... A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)."

Applicant's claims 6-11 and 13-14 are dependent claims that depend from Applicant's independent claim 5. As such Applicant's claims 6-11 and 13-14 include all of the steps and limitations of Applicant's claim 5. The MPEP states that all the limitations of the claims must be considered and given weight when evaluating claims for obviousness. It was shown above that Tsai et al. do not provide all of the teachings required to anticipate or suggest Applicant's independent claim 5. Roberts et al. do not provide the additional teachings necessary for combination with Tsai et al. to anticipate or suggest any of Applicant's claims 5-11, 13, and 14.

One of the deficiencies in the teachings of Tsai et al. and the teachings of Roberts et al. is that the references do not teach limitations of Applicant's claims such as the subpad having a "Shore D hardness substantially equal to the hardness of the

top pad." In other words, combining the references does not provide the teachings needed to make Applicant's claims 6-11 and 13-14 obvious.

Furthermore, the Office Action does not provide a rational underpinning to support a legal conclusion of obviousness as required in MPEP 2143.01 IV which states:

">[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396 quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)."

The Office Action fails to articulate a reason why a person of ordinary skill would modify the teachings of Tsai et al. with the teachings of Roberts et al. to obtain Applicant's invention. The articulated reason must be made in view of all of the teachings of Tsai et al. and all of the teachings of Roberts et al. as required in the MPEP. Some of the facts that must be considered are present below.

The Office Action states:

"One skilled in the art at the time the invention was made would have found it obvious to modify the Tsai method to include a step of conditioning a polishing pad using a down force of 0.1 psi after planarization of a plurality of wafers as per Robert to reform the micro-protrusions of the polishing pad..."

The statement is misleading because Roberts et al. only teach the range of pressures for down force conditioning as being between 0.1 to about 25 pounds per square inch.

Nowhere does Roberts et al. teach or suggest any expectation that low downforce pressures, such as less than 0.24 psi, provide results that would motivate a person of ordinary skill in the art to use such low downforce pressures. It is more likely that a person of ordinary skill in the art looking at all of the teachings of Roberts et al. would use a downforce pressure of about 10 pounds per square inch because that is the pressure that Roberts et al. teach for optimum conditioning (see [0074]). In view of the

teachings of Roberts et al., a person of ordinary skill in the art would have no motivation to optimize the down force again.

Furthermore, it is important to note that Roberts et al. use the same conditioning process, i.e., the optimum conditioning process, to condition the pad for comparative examples (example 1 and example 2) and an example for their invention (example 3) (see [0074], [0080], and [0081]). Although the conditioning processes were the same, Roberts et al. show that the results for their invention were better than those for the comparative examples (see [0083]). Consequently, it is clear that the difference in the results were not caused by the conditioning process but by some other teachings of Roberts et al. Furthermore, a person of ordinary skill in the art would realize that the improvements resulting from the teachings of Roberts et al. are not caused by the conditioning process. A person of ordinary skill in the art would be motivated to incorporate aspects of the teachings of Roberts et al. other than changing the conditioning process because Roberts et al. show that the conditioning process has no effect on the process results.

In view of the arguments presented above, withdrawal of the rejection of Applicant's dependent claims 6-11 and 13-14 under USC 103 is respectfully requested.

Section 5

Section 5 of the Office Action indicates that Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. (US 2003/0013387) in view of Chen et al. (US 6,712,681). The rejection of Claims 16-19 under 35 USC 103 is improper. The Office Action does not meet the requirements provided in the MPEP 2143.03 (see quote given above) for a rejection under 35 USC 103.

Applicant's claims 16-19 are dependent claims that depend from Applicant's independent claim 15. As such Applicant's claims 16-19 include all of the steps and limitations of Applicant's claim 15. The MPEP states that all the limitations of the claims must be considered and given weight when evaluating claims for obviousness. It was

shown above that Tsai et al. do not provide all of the teachings required to anticipate or suggest Applicant's independent claim 15. Chen et al. do not provide the additional teachings necessary for combination with Tsai et al. to anticipate or suggest any of Applicant's claims 16-19.

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One of the deficiencies in the teachings of Tsai et al. and the teachings of Chen et al. is that the references do not teach limitations of Applicant's claims such as "the stacked pad comprising a top pad and a subpad, wherein the hardness or modulus of the top pad substantially equals the hardness or modulus of the subpad...." In other words, combining the references does not provide the teachings to make Applicant's claims 16-19 obvious.

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In view of the arguments presented above, withdrawal of the rejection of Applicant's dependent claims 16-19 under USC 103 is respectfully requested.

Conclusions

In view of the foregoing remarks and/or amendments, further and favorable action in the form of a notice of allowance for claims 5 -19 is believed to be next in order, and such action is earnestly solicited.

If the Examiner finds the foregoing amendments and arguments not to be sufficient, then Applicant requests a phone call to the undersigned prior to mailing the next Office Action to discuss the matter so that necessary action may be taken to place the application in condition for allowance.

Please telephone the undersigned at (707) 523-7530 if there are any questions regarding this matter.

Respectfully submitted,

/LWilliams/

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